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Sept 30, 2013
NOAA Fisheries Service
1315 East West Highway
Silver Spring, MD 20910

RE: Discussion Draft: Electronic Monitoring and Electronic Reporting: Guidance and Best Practices for Federally-Managed Fisheries

Dear National Marine Fisheries Service:

Ocean Conservancy[1] appreciates this opportunity to provide comments on the Discussion Draft: Electronic Monitoring and Electronic Reporting: Guidance and Best Practices for Federally-Managed Fisheries. Overall, we find this document to provide good information on how National Marine Fisheries Service (NMFS) is considering the use of electronic monitoring and reporting systems (EMS) for fishery reporting and monitoring. The concepts presented in the document will allow productive debate regarding development and implementation of EMS as a fishery reporting and monitoring.

Technology holds much promise for fishery monitoring and reporting can serve to promote innovation and can modernize data collection methodologies. We support the proactive approach NMFS is taking in soliciting comments on development of the technology. While technology may serve to be an effective replacement for many current monitoring and reporting methods, a phased approach to implementation is a responsible tactic in the pursuit of better and more efficient data collection.

Most of our concerns were addressed in the discussion document: however, we offer a few thoughts on development of this technology and its forthcoming deployment as a fishery monitoring and reporting tool.

Summary of Recommendations:

- All electronic reporting and monitoring technology should be well tested to ensure electronic methods provide the same, if not increased, benefits to current methods.
- Due to funding challenges, NMFS should consider reducing its direct development of electronic monitoring systems and increase its advisory role in development.

[1] Ocean Conservancy is a non-profit organization that educates and empowers citizens to take action on behalf of the ocean. From the Arctic to the Gulf of Mexico to the halls of Congress, Ocean Conservancy brings people together to find solutions for our water planet. Informed by science, our work guides policy and engages people in protecting the ocean and its wildlife for future generations.

- NMFS should continue to require pilot projects on all new monitoring methods with strict oversight and provide the public with reports on successes, failures and recommendations of the projects.
- NMFs should consider organizing work groups similar to the MRIP program to allow for a diverse discussion and vigorous debate process to vet electronic monitoring testing, programs and potential use.
- Provide a detailed list of what fisheries and reporting systems exist for which this technology is applicable and rank the applicability of EM/ER based on the complexity of the fishery monitoring and reporting needs by the end of 2014.
- NMFS consider becoming the client of the data rather than the manager of the data.
- NMFS should consider third party data collection and warehousing.
- NMFS should create universal data reporting standards.
- NMFS should consider how public comment will be taken and assessed regarding the process.
- Restore Act §1604 (2012)[2] monies should be directed towards testing and implementing EMS technology in the Gulf of Mexico.

Discussion of Recommendations

1. Prioritization and testing of new monitoring and reporting programs

EMS technology is best suited for electronic reporting, but, at present, has limited monitoring capabilities. EMS is not a direct replacement for monitoring and reporting, and transition to technological methods should be approached with caution and fore-thought. In terms of technology, new does not necessarily equate with better. As with all new technology and reporting/monitoring methods, sufficient testing is warranted to ensure the technology can capture the required data with precision. It is also necessary to maintain historical data sets. Ocean Conservancy strongly recommends NMFS prioritize new monitoring and reporting programs relating to the complexity of the monitoring/reporting goals. The most complex system should be the product of the testing and implementation of lesser complicated EMS schemes. Setting realistic and attainable goals with timelines will increase the likelihood of successful implementation of the technology.

Unlike electronic reporting, electronic monitoring is not as common or as well developed as electronic reporting. Discussions of EM often center on video camera monitoring of catch and effort at-sea. Video monitoring is in its infancy as a monitoring tool. Current video technology can answer, at best, simple binary questions, e.g. presence or absence, full retention of catch, etc. It cannot answer difficult bycatch questions such as total catch composition of trawl caught mixed species flatfish on a trawl deck. Though promising advancements have been made, video monitoring should not be used at present to monitor multi-goal monitoring questions. It is, currently, best fit for simple monitoring goals, such as protected species bycatch on pelagic longline fisheries or full retention of catch. The technology will advance and it is possible the list of fisheries applicable for video monitoring will increase; however, it is best to focus video monitoring on those fisheries with simple monitoring needs at present.

Electronic monitoring will require extensive testing. Federal funding has fluctuated in recent years for governmental programs. Without secure funding for testing, implementation and infrastructure, the

[2] Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act), Pub. L. No. 112-141, § 1604 (2012).

quality and longevity of new systems is in jeopardy. NMFS should consider reducing its direct development of electronic monitoring and increase its advisory role in EM development by approaching industry and challenging them to design systems that are best fit for their fleet, fishery and individual vessels. NMFS would provide oversight, goal setting, design assistance, etc., but should encourage industry to play an active role in management. This will increase the 'buy-in' of the technology by the public.

Electronic reporting (ER), on the other hand, is likely to be easier to implement and integrate into existing data bases and reporting programs, as the change from paper based reporting to electronic is, on the whole, far less complicated than monitoring methodological changes. Ocean Conservancy recommends NMFS continue to require pilot projects on all new monitoring methods with strict oversight. We also suggest NMFS to provide the public with reports on successes, failures and recommendations of the projects much the same as the Marine Recreational Information Program (MRIP) does currently with their pilot projects.

2. Electronic Reporting as the standard for fishery reporting within five years

Electronic reporting is a timely and cost effective replacement of current methods used to submit data to NMFS. Ocean Conservancy recommends all applicable commercial and recreational fishery reporting be transitioned to electronic reporting. In our opinion, ER should be the standard for fishery reporting within five years. We recognize and appreciate concerns regarding the learning curve of new reporting methods; however, we believe five years to be an attainable goal for transition from contemporary methods to electronic. Worries over ER integration into business practices and data collection can be mitigated by the fact that technology, such as cellphones and email, are commonly used and are fast becoming the standard for everyday reporting of personal and business information. ER will provide detailed timely data to managers. Timely data is an absolute need for fishery managers to guarantee that conservation goals are met. Use of paper and postal service to record and ship data reports, such as dealer landings and logbooks, does not provide timely data and can add to management goals not being met.

Data reporting for the MRIP in the Gulf of Mexico is prime example of how electronic reporting can decrease the delay between field-collected data and data entry. Fishery samplers collect field data on paper and send it via United States Postal Service (USPS) to their respective state supervisors. After the supervisors edit the data, it is then sent via USPS to the Gulf States Marine Fisheries Commission for data base entry via an optical scanner. This process could be considerably shortened if, for example, samplers were to collect data via an electronic handheld device. We urge NMFS to continue pilot tests of technology to capture field data electronically and to explore the usefulness of electronic reporting methods; however, as noted in the discussion document, it may become necessary to alter existing reporting and monitoring data collection to fit to technology rather than to force technology to fit contemporary data collection methods.

3. NMFS should develop requirements for all fishery dependent data to be reported via electronic means

Regional Fishery Management Councils (RFMC) and NMFS should develop requirements for all fishery dependent data to be reported via electronic means. We are encouraged by recent actions of the South Atlantic and Gulf of Mexico Fishery Management Councils to require electronic logbook reporting by the south east headboat fleet[3] and electronic transmission of federal fishery dealer landings reports.[4]

[3] South Atlantic Fishery Management Council. 2013. South Atlantic For Hire Reporting Amendment. Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic: Revisions to Headboat Reporting Requirements for Species Managed by the South Atlantic Fishery Management Council. NOAA-NMFS-2013-0080

These actions will provide timely data to fishery managers, allowing decisions to be made based on the best available and most up-to-date information to meet conservation goals.

The process from pilot to implementation will be expensive. Most regions do not have the infrastructure or ability to fund pilot projects, let alone fully implemented programs. The Deepwater Horizon oil spill offers a unique opportunity to NMFS in furthering EMS research. As part of the Deepwater Horizon oil spill restoration mitigation, funding in the Gulf potentially exists for NMFS to develop long term monitoring methods. Ocean Conservancy recommends that NMFS direct the Southeast Fishery Science Center to apply RESTORE Act §1604[5] funding to EM research. These restoration dollars could serve to determine the benefits and utility of EM, and utilize the monies in a manner consistent with the RESTORE Act's charge. Because of the diversity of commercial and recreational fisheries in the Gulf, fisheries in the region could become the testing ground for EM; lessons learned here could be exported to other regions.

4. Governance and Guidance

Testing, development and implementation of EMS will require strong process driven programmatic leadership. As NMFS is beginning the dialogue of how to begin transition of reporting and monitoring from paper to electronic collection and transmission, creation of a process to lead these efforts is timely and necessary. Ocean Conservancy encourages NMFS to create a system of governance for EMS similar to how MRIP is organized.[6,7] We urge NMFS to invest effort into the creation of operation teams with dedicated and specifically charged working groups, consisting of stakeholders, and external and internal experts. This method will allow for vigorous discussion with a wide variety of voices. This inclusive process allows critical stakeholders to provide input and will make certain that best methods for design are created and adhered to. It will encourage public participation in the process and will increase the support from fishery participants.

A concern voiced in the document on page 32 is NMFS is not prepared to handle the expected large volume of new data and does not possess the necessary oversight to manage it. Ocean Conservancy suggests NMFS consider the use of third party data collection and warehousing. This will allow the Agency to concentrate on data standards, collection and fishery management—core priorities of NMFS. NMFS should guide and create policies for EMS but should consider not serving as the single source data repository, software designer or mangers. NMFS would set the guidelines, goals and functional needs for all reporting/monitoring technology but allow for industry to develop the technology best fit for each fishery. NMFS would audit all participants on a regular basis to insure adherence to NMFS policy.

At present NMFS does not have infrastructure sufficient to attain the needs of EMS as envisioned. We suggest NMFS consider becoming the client of the data, similar to the Internal Revenue Service (IRS). This will streamline, reduce costs and increase innovation in reporting/monitoring methods. It will release the burden from NMFS of needing to add infrastructure. Further, it will encourage innovation

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[4] Gulf of Mexico Fisheries Management Council. 2013. Generic Amendment to the fishery management plans for the Gulf of Mexico and South Atlantic Regions for Modifications to Federally-Permitted Seafood Dealer Reporting Requirements, Including Environmental Assessment, Social Impact Statement/Fishery Impact Statement, Regulatory Impact Review, and Regulatory Flexibility Act Analysis. 107p.

[5] Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act), Pub. L. No. 112-141, § 1604 (2012).

[6] MRIP Organizational Description. Retrieved from [http://www.st.nmfs.noaa.gov/recreational-fisheries/in-depth/making-improvements-mrip-initiative/organization/index]

[7] MRIP Governance Structure Flow Chart. Retrieved from [http://www.st.nmfs.noaa.gov/Assets/recreational/images/governance_structure.jpg]

from service providers to develop systems best fit for industry. This arrangement is not unheard of in US government; for example Turbo Tax[8] serves the IRS as a warehouse and transmission hub for income tax information. This arrangement is under guidance and strict chain-of-custody policies. The data remains safe and confidential, yet allows industry to tailor and streamline the reporting process to its clients. NMFS should consider a similar method for EMS, guiding and setting governance for systems but not directly managing or funding the internal structure.

As noted in the document, we strongly agree that NMFS should set monitoring and reporting data standards, but not be overly prescriptive of specific software and hardware requirements. This will allow for innovation and, potentially, a cost savings on the part of industry. Current VMS type approved devices limits industry to few choices, increasing cost. Integration of new technology into existing vessel hardware is a distinct possibility, given the state of technology.

5. Data

Ocean Conservancy strongly urges NMFS to create a set of universal data standards for all EM and ER data streams and collection. This could be the single most important piece to monitoring and reporting. Current reporting systems, such as MRIP and west coast recreational fishery sampling programs, do not utilize a single reporting standard. Integration of data streams requires correction factors, adding to a delay of reporting.

6. Public Input

We urge NMFS to determine how public input will be solicited and integrated into this process. At present, there appears to be no avenue of how to accept and integrate stakeholder concepts into the larger, overall scheme. Many, if not most, EMS programs will be implemented through RFMCs. The Councils provide an excellent platform for public participation; however, it is the process of pilot project design and process that will need to be addressed and brought to the public. The nebulous requirements for pilot programs under varying grants are confusing and ill advertised. Ocean Conservancy believes this is where NMFS can improve its communication. Outreach efforts to educate stakeholders on EM/ER and how they can become an integral partner are warranted, and the MRIP process can be used as a model.

NMFS should also hold a series of public workshops, similar to the Volunteer/Self-Reported Angler Data Workshop held by the Mid-Atlantic Fishery Management Council in 2012,[9] to provide the public with information and opportunity to make their interests known regarding EMS. Public involvement will be crucial to the long term success of this process. Further, the perception of what EM/ER is, versus what is conceptual at this point, needs to be brought to the public. We urge NMFS to hold multiple regional meetings whereby NMFS and RFMCs meet with stakeholders to manage expectations of EM and implementation. This will serve to bring alignment between public expectations of the technology and feasibility of use.

Conclusion

Ocean Conservancy supports innovation and modernization in fishery dependent science, we believe this technology will enhance data collection capabilities, allow for more timely data processing and increase stakeholder buy-in. However, we strongly believe this technology should not be utilized without appropriate testing and considerable thought given to internal NMFS infrastructure development. We appreciate efforts by NMFS to create an ongoing dialogue with industry, managers

[8] see https://turbotax.intuit.com/

[9] Mid-Atlantic Fishery Management Council. 2012. Volunteer/Self-Reported Angler Data Workshop. February 2, 2012. Baltimore, MD. [retrieved from http://www.mafmc.org/workshop/volunteerself-reported-angler-data-workshop]

and stakeholders on EMS. This is an important step in this process. Managing expectations of what this technology can, and more importantly, what it cannot do is crucial to success of EMS. Increased use of technology as a fishery monitoring and data reporting tool is warranted and necessary to better inform fishery managers, scientists and stakeholders.

Sincerely,

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